**BEFORE THE ADMINISTRATOR**
**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

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Petition No. IX-2024-21

In the Matter of

Arizona Electric Power Cooperative Inc., Apache Generating Station

Permit No. 69734

Issued by the Arizona Department of Environmental Quality

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# ORDER GRANTING IN PART AND DENYING IN PART A PETITION FOR OBJECTION TO A TITLE V OPERATING PERMIT

## I. INTRODUCTION

The U.S. Environmental Protection Agency (EPA) received a petition dated September 18, 2024, (the "Petition") from Sierra Club (the "Petitioner"), pursuant to Clean Air Act (CAA) § 505(b)(2), 42 United States Code (U.S.C.) § 7661d(b)(2). The Petition requests that the EPA Administrator object to operating permit No. 69734 (the "Permit") issued by the Arizona Department of Environmental Quality (ADEQ) to the Arizona Electric Power Cooperative Inc., Apache Generating Station ("Apache") in Cochise County, Arizona. The Permit was issued pursuant to title V of the CAA, 42 U.S.C. §§ 7661–7661f, and Title 18, Chapter 2, Article 3 of the Arizona Administrative Code (A.A.C.). *See also* 40 Code of Federal Regulations (C.F.R.) part 70 (title V implementing regulations). This type of operating permit is also known as a title V permit or part 70 permit.

Based on a review of the Petition and other relevant materials, including the Permit, the permit record, and relevant statutory and regulatory authorities, and as explained in Section IV of this Order, the EPA grants in part and denies in part the Petition and objects to the issuance of the Permit. Specifically, the EPA grants Claim 1C and denies the rest of the claims.

## II. STATUTORY AND REGULATORY FRAMEWORK

### A. Title V Permits

CAA § 502(d)(1), 42 U.S.C. § 7661a(d)(1), requires each state to develop and submit to the EPA an operating permit program to meet the requirements of title V of the CAA

and the EPA's implementing regulations at 40 C.F.R. part 70. The state of Arizona submitted a title V operating permit program in 1993. The EPA granted interim approval of Arizona's title V operating permit program in 1996. 61 Fed. Reg. 55910 (Oct. 30, 1996). The EPA granted full approval of Arizona's title V operating permit program in 2001. 66 Fed. Reg. 63175 (Dec. 5, 2001). Arizona's program, which became effective on November 30, 2001, is codified in Title 18, Chapter 2, Article 3 of the A.A.C.

All major stationary sources of air pollution and certain other sources are required to apply for and operate in accordance with title V operating permits that include emission limitations and other conditions as necessary to assure compliance with applicable requirements of the CAA, including the requirements of the applicable implementation plan. 42 U.S.C. §§ 7661a(a), 7661b, 7661c(a). The title V operating permit program generally does not impose new substantive air quality control requirements, but does require permits to contain adequate monitoring, recordkeeping, reporting, and other requirements to assure compliance with applicable requirements. 40 C.F.R. § 70.1(b); 42 U.S.C. § 7661c(c). One purpose of the title V operating permit program is to "enable the source, States, EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements." 57 Fed. Reg. 32250, 32251 (July 21, 1992). Thus, the title V operating permit program is a vehicle for compiling the air quality control requirements as they apply to the source's emission units and for providing adequate monitoring, recordkeeping, and reporting to assure compliance with such requirements.

### B. Review of Issues in a Petition

State and local permitting authorities issue title V permits pursuant to their EPA-approved title V operating permit programs. Under CAA § 505(a) and the relevant implementing regulations found at 40 C.F.R. § 70.8(a), states are required to submit each proposed title V operating permit to the EPA for review. 42 U.S.C. § 7661d(a). Upon receipt of a proposed permit, the EPA has 45 days to object to final issuance of the proposed permit if the EPA determines that the proposed permit is not in compliance with applicable requirements under the CAA. 42 U.S.C. § 7661d(b)(1); *see also* 40 C.F.R. § 70.8(c). If the EPA does not object to a permit on its own initiative, any person may, within 60 days of the expiration of the EPA's 45-day review period, petition the Administrator to object to the permit. 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d).

Each petition must identify the proposed permit on which the petition is based and identify the petition claims. 40 C.F.R. § 70.12(a). Any issue raised in the petition as grounds for an objection must be based on a claim that the permit, permit record, or permit process is not in compliance with applicable requirements or requirements under 40 C.F.R. part 70. 40 C.F.R. § 70.12(a)(2). Any arguments or claims the petitioner

wishes the EPA to consider in support of each issue raised must generally be contained within the body of the petition.[1] *Id.*

The petition shall be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided by the permitting authority (unless the petitioner demonstrates in the petition to the Administrator that it was impracticable to raise such objections within such period or unless the grounds for such objection arose after such period). 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d); *see also* 40 C.F.R. § 70.12(a)(2)(v).

In response to such a petition, the CAA requires the Administrator to issue an objection if a petitioner demonstrates that a permit is not in compliance with the requirements of the CAA. 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(c)(1).[2] Under CAA § 505(b)(2), the burden is on the petitioner to make the required demonstration to the EPA.[3] The petitioner's demonstration burden is a critical component of CAA § 505(b)(2). As courts have recognized, CAA § 505(b)(2) contains both a "discretionary component," under which the Administrator determines whether a petition demonstrates that a permit is not in compliance with the requirements of the CAA, and a nondiscretionary duty on the Administrator's part to object if such a demonstration is made. *Sierra Club v. Johnson*, 541 F.3d at 1265–66 ("[I]t is undeniable [that CAA § 505(b)(2)] also contains a discretionary component: it requires the Administrator to make a judgment of whether a petition demonstrates a permit does not comply with clean air requirements."); *NYPIRG*, 321 F.3d at 333. Courts have also made clear that the Administrator is only obligated to grant a petition to object under CAA § 505(b)(2) if the Administrator determines that the petitioner has demonstrated that the permit is not in compliance with requirements of the CAA. *Citizens Against Ruining the Environment*, 535 F.3d at 677 (stating that CAA § 505(b)(2) "clearly obligates the Administrator to (1) determine whether the petition demonstrates noncompliance and (2) object *if* such a demonstration is made" (emphasis added)).[4] When courts have reviewed the EPA's interpretation of the ambiguous term "demonstrates" and its determination as to whether the demonstration has been made, they have applied a deferential standard of

[1] If reference is made to an attached document, the body of the petition must provide a specific citation to the referenced information, along with a description of how that information supports the claim. In determining whether to object, the Administrator will not consider arguments, assertions, claims, or other information incorporated into the petition by reference. *Id*.

[2] *See also New York Public Interest Research Group, Inc. v. Whitman*, 321 F.3d 316, 333 n.11 (2d Cir. 2003) (*NYPIRG*).

[3] *See also WildEarth Guardians v. EPA*, 728 F.3d 1075, 1081–82 (10th Cir. 2013); *MacClarence v. EPA*, 596 F.3d 1123, 1130–33 (9th Cir. 2010); *Sierra Club v. EPA*, 557 F.3d 401, 405–07 (6th Cir. 2009); *Sierra Club v. Johnson*, 541 F.3d 1257, 1266–67 (11th Cir. 2008); *Citizens Against Ruining the Environment v. EPA*, 535 F.3d 670, 677–78 (7th Cir. 2008); *cf. NYPIRG*, 321 F.3d at 333 n.11.

[4] *See also Sierra Club v. Johnson*, 541 F.3d at 1265 ("Congress's use of the word 'shall' . . . plainly mandates an objection *whenever* a petitioner demonstrates noncompliance." (emphasis added)).

review. *See, e.g.*, *MacClarence*, 596 F.3d at 1130–31.[5] Certain aspects of the petitioner's demonstration burden are discussed in the following paragraph. A more detailed discussion can be found in the preamble to the EPA's proposed petitions rule. *See* 81 Fed. Reg. 57822, 57829–31 (Aug. 24, 2016); *see also In the Matter of Consolidated Environmental Management, Inc., Nucor Steel Louisiana*, Order on Petition Nos. VI-2011-06 and VI-2012-07 at 4–7 (June 19, 2013) (*Nucor II Order*).

The EPA considers a number of criteria in determining whether a petitioner has demonstrated noncompliance with the CAA. *See generally Nucor II Order* at 7. For example, one such criterion is whether a petitioner has provided the relevant analyses and citations to support its claims. For each claim, the petitioner must identify (1) the specific grounds for an objection, citing to a specific permit term or condition where applicable; (2) the applicable requirement as defined in 40 C.F.R. § 70.2, or requirement under 40 C.F.R. part 70, that is not met; and (3) an explanation of how the term or condition in the permit, or relevant portion of the permit record or permit process, is not adequate to comply with the corresponding applicable requirement or requirement under 40 C.F.R. part 70. 40 C.F.R. § 70.12(a)(2)(i)–(iii). If a petitioner does not identify these elements, the EPA is left to work out the basis for the petitioner's objection, contrary to Congress's express allocation of the burden of demonstration to the petitioner in CAA § 505(b)(2). *See MacClarence*, 596 F.3d at 1131 ("[T]he Administrator's requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and persuasive.").[6] Relatedly, the EPA has pointed out in numerous previous orders that general assertions or allegations did not meet the demonstration standard. *See, e.g.*, *In the Matter of Luminant Generation Co., Sandow 5 Generating Plant*, Order on Petition Number VI-2011-05 at 9 (Jan. 15, 2013).[7] Also, the failure to address a key element of a particular issue presents further grounds for the EPA to determine that a petitioner has not demonstrated a flaw in the permit. *See, e.g.*, *In the Matter of EME Homer City Generation LP and First Energy Generation Corp.*, Order on Petition Nos. III-2012-06, III-2012-07, and III-2013-02 at 48 (July 30, 2014).[8]

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[5] *See also Sierra Club v. Johnson*, 541 F.3d at 1265–66; *Citizens Against Ruining the Environment*, 535 F.3d at 678.

[6] *See also In the Matter of Murphy Oil USA, Inc.*, Order on Petition No. VI-2011-02 at 12 (Sept. 21, 2011) (denying a title V petition claim where petitioners did not cite any specific applicable requirement that lacked required monitoring); *In the Matter of Portland Generating Station*, Order on Petition at 7 (June 20, 2007) (*Portland Generating Station Order*).

[7] *See also Portland Generating Station Order* at 7 ("[C]onclusory statements alone are insufficient to establish the applicability of [an applicable requirement]."); *In the Matter of BP Exploration (Alaska) Inc., Gathering Center #1*, Order on Petition Number VII-2004-02 at 8 (Apr. 20, 2007); *In the Matter of Georgia Power Company*, Order on Petitions at 9–13 (Jan. 8, 2007) (*Georgia Power Plants Order*); *In the Matter of Chevron Products Co., Richmond, Calif. Facility*, Order on Petition No. IX-2004–10 at 12, 24 (Mar. 15, 2005).

[8] *See also In the Matter of Hu Honua Bioenergy*, Order on Petition No. IX-2011-1 at 19–20 (Feb. 7, 2014); *Georgia Power Plants Order* at 10.

Another factor the EPA examines is whether the petitioner has addressed the state or local permitting authority's decision and reasoning contained in the permit record. 81 Fed. Reg. at 57832; *see Voigt v. EPA*, 46 F.4th 895, 901–02 (8th Cir. 2022); *MacClarence*, 596 F.3d at 1132–33.[9] This includes a requirement that petitioners address the permitting authority's final decision and final reasoning (including the state's response to comments) where these documents were available during the timeframe for filing the petition. 40 C.F.R. § 70.12(a)(2)(vi). Specifically, the petition must identify where the permitting authority responded to the public comment and explain how the permitting authority's response is inadequate to address (or does not address) the issue raised in the public comment. *Id*.

The information that the EPA considers in determining whether to grant or deny a petition submitted under 40 C.F.R. § 70.8(d) generally includes, but is not limited to, the administrative record for the proposed permit and the petition, including attachments to the petition. 40 C.F.R. § 70.13. The administrative record for a particular proposed permit includes the draft and proposed permits, any permit applications that relate to the draft or proposed permits, the statement required by 40 C.F.R. § 70.7(a)(5) (sometimes referred to as the "statement of basis"), any comments the permitting authority received during the public participation process on the draft permit, the permitting authority's written responses to comments, including responses to all significant comments raised during the public participation process on the draft permit, and all materials available to the permitting authority that are relevant to the permitting decision and that the permitting authority made available to the public according to § 70.7(h)(2). *Id.* If a final permit and a statement of basis for the final permit are available during the EPA'ss review of a petition on a proposed permit, those documents may also be considered when determining whether to grant or deny the petition. *Id*.

If the EPA grants a title V petition and objects to the issuance of a permit, a permitting authority may address the EPA's objection by, among other things, providing the EPA with a revised permit. 42 U.S.C. § 7661d(b)(3), (c); 40 C.F.R. § 70.8(d); *see id*. § 70.7(g)(4), 70.8(c)(4); *see generally* 81 Fed. Reg. at 57842 (describing post-petition procedures); *Nucor II Order* at 14–15 (same). In some cases, the permitting authority's response to an EPA objection may not involve a revision to the permit terms and conditions themselves, but may instead involve revisions to the permit record. For example, when the EPA has issued a title V objection on the grounds that the permit

[9] *See also, e.g.*, *Finger Lakes Zero Waste Coalition v. EPA*, 734 Fed. App'x *11, *15 (2d Cir. 2018) (summary order); *In the Matter of Noranda Alumina, LLC*, Order on Petition No. VI-2011-04 at 20–21 (Dec. 14, 2012) (denying a title V petition issue where petitioners did not respond to the state's explanation in response to comments or explain why the state erred or why the permit was deficient); *In the Matter of Kentucky Syngas, LLC*, Order on Petition No. IV-2010-9 at 41 (June 22, 2012) (denying a title V petition issue where petitioners did not acknowledge or reply to the state's response to comments or provide a particularized rationale for why the state erred or the permit was deficient); *Georgia Power Plants Order* at 9–13 (denying a title V petition issue where petitioners did not address a potential defense that the state had pointed out in the response to comments).

record does not adequately support the permitting decision, it may be acceptable for the permitting authority to respond only by providing an additional rationale to support its permitting decision.

When the permitting authority revises a permit or permit record to resolve an EPA objection, it must go through the appropriate procedures for that revision. If a final permit has been issued prior to the EPA's objection, the permitting authority should determine whether its response to the EPA's objection requires a minor modification or a significant modification to the title V permit, as described in 40 C.F.R. § 70.7(e)(2) and (4) or the corresponding regulations in the state's EPA-approved title V operating permit program. If the permitting authority determines that the revision is a significant modification, then the permitting authority must provide for notice and opportunity for public comment for the significant modification consistent with 40 C.F.R. § 70.7(h) or the state's corresponding regulations.

In any case, whether the permitting authority submits revised permit terms, a revised permit record, or other revisions to the permit, and regardless of the procedures used to make such revisions, the permitting authority's response is generally treated as a new proposed permit for purposes of CAA § 505(b) and 40 C.F.R. § 70.8(c) and (d). *See Nucor II Order* at 14. As such, it would be subject to the EPA's 45-day review per CAA § 505(b)(1) and 40 C.F.R. § 70.8(c), and an opportunity for the public to petition under CAA § 505(b)(2) and 40 C.F.R. § 70.8(d) if the EPA does not object during its 45-day review period.

When a permitting authority responds to an EPA objection, it may choose to do so by modifying the permit terms or conditions or the permit record with respect to the specific deficiencies that the EPA identified; permitting authorities need not address elements of the permit or the permit record that are unrelated to the EPA's objection. As described in various title V petition orders, the scope of the EPA's review (and accordingly, the appropriate scope of a petition) on such a response would be limited to the specific permit terms or conditions or elements of the permit record modified in that permit action. *See In the Matter of Hu Honua Bioenergy, LLC*, Order on Petition No. VI-2014-10 at 38–40 (Sept. 14, 2016); *In the Matter of WPSC, Weston*, Order on Petition No. V-2006-4 at 5–6, 10 (Dec. 19, 2007).

### C. New Source Review

The major New Source Review (NSR) program encompasses two core types of preconstruction permit requirements for major stationary sources. CAA title I, part C establishes the Prevention of Significant Deterioration (PSD) program, which applies to new major stationary sources and major modifications of existing major stationary sources for pollutants for which an area is designated as attainment or unclassifiable for the National Ambient Air Quality Standards (NAAQS) and for other pollutants regulated under the CAA. 42 U.S.C. §§ 7470–7479. CAA title I, part D establishes the major

nonattainment NSR (NNSR) program, which applies to new major stationary sources and major modifications of existing major stationary sources for those NAAQS pollutants for which an area is designated as nonattainment. 42 U.S.C. §§ 7501–7515. The EPA has two largely identical sets of regulations implementing the PSD program. One set, found at 40 C.F.R. § 51.166, contains the requirements that state PSD programs must meet to be approved as part of a state implementation plan (SIP). The other set of regulations, found at 40 C.F.R. § 52.21, contains the EPA's federal PSD program, which applies in areas without a SIP-approved PSD program. The EPA's regulations specifying requirements for state NNSR programs are contained in 40 C.F.R. § 51.165.

While CAA title I parts C and D address the major NSR program for major sources, CAA section 110(a)(2)(C) addresses the permitting program for new and modified minor sources and for minor modifications to major sources. The EPA commonly refers to the latter program as the "minor NSR" program. States must also develop minor NSR programs to, along with the major source programs, attain and maintain the NAAQS. The federal requirements for state minor NSR programs are outlined in 40 C.F.R. §§ 51.160–51.164. These federal requirements for minor NSR programs are less prescriptive than those for major sources, and, as a result, there is a larger variation of requirements in EPA-approved state minor NSR programs than in major source programs.

The EPA has approved Arizona's PSD, NNSR, and minor NSR programs as part of its SIP. *See* 40 C.F.R. § 52.120 (identifying EPA-approved regulations in the Arizona SIP). Arizona's major and minor NSR provisions, as incorporated into Arizona's EPA-approved SIP, are contained in portions of Title 18, Chapter 2 of the A.A.C.

Where the EPA has approved a state's title I permitting program (whether PSD, NNSR, or minor NSR), NSR permits issued following public notice and the opportunity for public comment and judicial review establish the NSR-related "applicable requirements" for the purposes of title V. As with "applicable requirements" established through other CAA authorities, the terms and conditions of those permits should be incorporated into a source's title V permit without a further round of substantive review as part of the title V process. The EPA has explained and reiterated this interpretation in numerous orders. *See, e.g.*, *In the Matter of Big River Steel, LLC*, Order on Petition No. VI-2013-10 at 8–20 (Oct. 31, 2017) (*Big River Steel Order*). The EPA also recently proposed rule revisions to more clearly reflect this approach, and that proposed rulemaking explains at length the legal and policy underpinnings of this approach. S*ee* 89 Fed. Reg. 1150, 1160–84 (Jan. 9, 2024). Accordingly, the EPA will generally not consider the merits of a permitting authority's NSR permitting decisions in a petition to object to a source's title

V permit. *See Big River Steel Order* at 8–9, 14–20.[10] Rather, any such challenges should be raised through the appropriate title I permitting procedures or enforcement authorities.

## III. BACKGROUND

### A. The Apache Generating Station

The Apache facility consists of a coal steam electric unit, a natural gas steam electric combined cycle unit, a natural gas steam unit, and four natural gas/oil-fired turbines. In this permitting action, Apache proposes to install two additional natural gas turbines (GT5 and GT6). GT5 and GT6 will generate up to approximately 84 megawatts of power. Apache is a major source under title V for particulate matter (PM) <10 µm in diameter ($PM_{10}$), PM <2.5 µm in diameter ($PM_{2.5}$), sulfur dioxide ($SO_2$), nitrogen oxides ($NO_x$), carbon monoxide (CO), volatile organic compounds (VOC), and hazardous air pollutants (HAPs).

### B. Permitting History

Arizona Electric Power Cooperative, Inc. (AEPCO) first obtained a title V permit for Apache in 2000, which was subsequently renewed. On July 20, 2023, AEPCO applied for a combined title I preconstruction authorization and significant modification to the title V permit.[11] On February 21, 2024, ADEQ published notice of a draft permit, subject to a public comment period that ended on March 21, 2024. On June 5, 2024, ADEQ submitted a proposed title V permit, along with its responses to public comments (RTC), to the EPA for its 45-day review. The EPA's 45-day review period of the proposed title V permit ended on July 22, 2024, during which time the EPA did not object to the proposed title V permit. On August 29, 2024, ADEQ issued the final Permit for Apache

[10] However, as the EPA noted in the *Big River Steel Order*, there may be circumstances that "warrant a different approach." *Big River Steel Order* at 11 n.20. The preamble to the proposed Applicable Requirements Rule includes a summary of the different fact patterns in which EPA has (or has not) applied this approach. *See* 89 Fed. Reg. at 1163–64, 1165–70. Additionally, even in situations where this approach applies, the EPA does view monitoring, recordkeeping, and reporting to be part of the title V permitting process and will therefore continue to review whether a title V permit contains monitoring, recordkeeping, and reporting provisions sufficient to assure compliance with the terms and conditions established in a preconstruction permit. *See, e.g.*, *In the Matter of South Louisiana Methanol, LP*, Order on Petition Nos. VI-2016-24 and VI -2017-14 at 10–11 (May 29, 2018) (*South Louisiana Methanol Order*); *Big River Steel Order* at 17, 17 n.30, 19 n.32, 20. Moreover, as the EPA has explained, "[A] decision by the EPA not to object to a title V permit that includes the terms and conditions of a title I permit does not indicate that the EPA has concluded that those terms and conditions comply with the applicable SIP or the CAA. However, until the terms and conditions of the title I permit are revised, reopened, suspended, revoked, reissued, terminated, augmented, or invalidated through some other mechanism, such as a state court appeal, the 'applicable requirement' remains the terms and conditions of the issued preconstruction permit and they should be included in the source's title V permit." *Big River Steel Order* at 19.

[11] In Arizona, title I preconstruction permits and title V operating permits are typically issued in a single "unitary" permit document, called a "Class I permit." *See* A.A.C. R18-2-302.

### C. Timeliness of Petition

Pursuant to the CAA, if the EPA does not object to a proposed permit during its 45-day review period, any person may petition the Administrator within 60 days after the expiration of the 45-day review period to object. 42 U.S.C § 7661d(b)(2). The EPA's 45-day review period ended on July 22, 2024. Thus, any petition seeking the EPA's objection to the Permit was due on or before September 20, 2024. The Petition was submitted September 20, 2024. Therefore, the EPA finds that the Petitioner timely filed the Petition.

## IV. EPA DETERMINATIONS ON PETITION CLAIMS

The Petition includes a section titled "Petition Claim 1: The Administrator Must Object to the Final Permit Because It Fails to Include Adequate Terms and Conditions to Create Enforceable Limitations on the New Turbines' Potential to Emit $PM_{2.5}/PM_{10}$." Petition at 3; *see id.* at 3–18. This section includes what the EPA has identified as three claims, which the EPA addresses separately as Claims 1A, 1B, and 1C, respectively, in this Order. The Petition also includes four other claims, Claims 2, 3, 4, and 5.

### A. Claim 1A: The Petitioner Claims That "The Proposed $PM_{10}/PM_{2.5}$ Limit of 9.9 Tons per 12-Month Limit for GT5 and GT6 is Not Supported by the Permit Record as a Technically Accurate Limit."

***Petition Claim:*** The Petitioner asserts that the Permit's limit on $PM_{10}/PM_{2.5}$ emissions is not practically enforceable because the permit record does not support a finding that GT5 and GT6 can comply with the limit at the planned levels of operation. *Id*. at 3. The Petitioner claims that the Permit's 9.9 tons per rolling 12-month period limit on $PM_{10}/PM_{2.5}$ from GT5 and GT6 reflects a lower annual emissions level than is supported by the emission rates and operational information in AEPCO's Permit Application. *Id.* at 5. The Petitioner calculates from information in the Permit Application that the expected $PM_{10}/PM_{2.5}$ emissions from GT5 and GT6 total 13.5 tons per year (tpy). *Id.* at 6. The Petitioner emphasizes that 13.5 tpy was also specifically identified in the Permit Application as the predicted annual emissions rate for GT5 and GT6. *Id*. at 5 (citing Permit Application at 38). The Petitioner states that this amount exceeds Arizona's and the EPA's PSD major modification significance level for $PM_{2.5}$ of 10 tpy, and it also significantly exceeds the Permit's 9.9 ton per 12-month period limit on $PM_{10}/PM_{2.5}$. *Id*. at 6.

The Petitioner provides that in a 1995 guidance document, the EPA listed a number of criteria for limits on potential to emit (PTE) to be enforceable as a practical matter, including that the permit must specify a "technically accurate limitation" *Id*. at 6 (citing Petition Ex. 7, Kathie A. Stein, EPA, *Guidance and Enforceability Requirements for Limiting Potential to Emit through SIP and §112 Rules and General Permits* at 6 (Jan. 25,

1995) ("1995 Stein Guidance"). The Petitioner suggests the Permit's $PM_{10}/PM_{2.5}$ emission limit is not a technically accurate emission limit based on the predicted annual emissions rate of 13.5 tpy provided by AEPCO in the Permit Application. *Id.* at 7.

The Petitioner alleges that ADEQ's RTC is unresponsive to public comments on this issue and fails to explain why it is justified to impose a 9.9 ton per rolling 12-month period limit on $PM_{10}/PM_{2.5}$ and to exempt GT5 and GT6 from PSD permitting requirements. *Id*.

The Petitioner also alleges that ADEQ replied on vendor guarantees to support the emission rate calculations, and that such vendor guarantees are not included in the Permit Application or in the administrative record for the Permit. *Id*.

***EPA Response:*** For the following reasons, the EPA denies the Petitioner's request for an objection on this claim.

To the extent the Petitioner asserts that the Permit's $PM_{10}/PM_{2.5}$ limit on GT5 and GT6 cannot be relied on to restrict the PTE of these units for purposes of determining whether the construction of those units triggers PSD requirements, this is not an issue properly before the EPA in the present Petition response. As discussed in Sections II.C and IV.F of this Order, a title V petition is not the appropriate forum for reviewing the merits of the Petitioner's NSR-related claims, notwithstanding ADEQ's decision to issue a single permit document that contains both NSR- and title V-based requirements. *See In the Matter of Yuhuang Chemical Inc. Methanol Plant,* Order on Petition Nos. VI-2017-5 & VI-2017-13 at 7–8 (Apr. 2, 2018) (*Yuhuang II Order*); *In the Matter of Salt River Project Agricultural Improvement and Power District Coolidge Generating Station*, Order on Petition No. IX-2024-7 at 23 (Sept. 11, 2024) (*SRP Coolidge Order*).

The Petitioner does not identify any other reason why the alleged technical inaccuracy of this limit would present a basis for the EPA's objection (*i.e.*, a basis for objection unrelated to PSD applicability). 40 C.F.R. § 70.12(a)(2)(ii). Nonetheless, to the extent the Petition could be interpreted to raise such a claim,[12] it is denied. The Petitioner's claim that the limit is unenforceable because it is not a "technically accurate limitation" appears to be based on a misunderstanding of the EPA's guidance on this topic, as well as a misunderstanding of the facts here.

[12] As the EPA has acknowledged: "[C]laims concerning whether a title V permit contains enforceable permit terms, supported by monitoring sufficient to assure compliance with an applicable requirement or permit term (such as an emission limit established in a PSD permit), are properly reviewed during title V permitting. The statutory obligations to ensure that each title V permit contains 'enforceable emission limitations and standards' supported by 'monitoring . . . requirements to assure compliance with the permit terms and conditions,' 42 U.S.C. 7661c(a), (c), apply independently from and in addition to the underlying regulations and permit actions that give rise to the emission limits and standards that are included in a title V permit. Therefore, the EPA will address the merits of those portions of the Petition that challenge the enforceability of emission limits and the sufficiency of monitoring conditions in the Permit." 89 Fed. Reg. 1150, 1170 (Jan. 9, 2024) (quoting and citing multiple title V petition orders); *see also Yuhuang II Order* at 8; *SRP Coolidge Order* at 23 n.35.

The Petitioner cites the 1995 Stein Guidance, which identified "a technically accurate limitation" as a criterion for a limit to be enforceable as a practical matter, as the basis for the claim that the Permit's $PM_{10}/PM_{2.5}$ limit of 9.9 tons per 12-month period is not enforceable as a practical matter. *See* Petition at 6. However, the Petitioner does not identify anything in the 1995 Stein Guidance that would indicate the emission limit at issue is not enforceable as a practical matter. The 1995 Stein Guidance describes criteria to make limits enforceable as a practical matter, including that "the standards set must be technically sufficient to provide assurance to EPA and the public that they actually represent a limitation on the potential to emit." 1995 Stein Guidance at 8. This criterion is especially important when ensuring that limits on production, control efficiencies, or other parameters, as a technical matter, have the intended effect of restricting emissions. But the Petitioner's concerns do not appear relevant to the type of limit established by the Permit, which limits PTE by directly limiting emissions (*i.e.*, the limit here is a limit on emissions, as opposed to a limit on production or some other parameter related to emissions). As ADEQ explains in its RTC, "The facility has accepted the voluntary limit and must operate the turbines in a manner that will ensure compliance." RTC at 6.

In this claim, the Petitioner's only argument is that because the Permit's $PM_{10}/PM_{2.5}$ emission limit is lower than the predicted annual emissions rate for GT5 and GT6 as estimated in the Permit Application, the limit does not reflect Apache's planned levels of operation. But that does not render the limit technically inaccurate or unenforceable as a practical matter. In fact, the purpose of AEPCO requesting an emission limit to restrict PTE is precisely to establish an emission limit that is lower than Apache's emissions might have been without the limit. In other words, the fact that the permit application predicted an annual emission rate of 13.5 tpy simply reflects the fact that additional limits are necessary to restrict PTE below 10 tpy. This is not a concession that Apache cannot operate below 13.5 tpy. Apache will have to adjust its operations as necessary to comply with the 9.9 tons per 12-month limit.

Apache must demonstrate compliance with this limit using the monitoring requirements discussed in Claims 1B and 1C. If this monitoring shows that Apache has not complied with the limit, that could be handled through a future enforcement action. But the Petitioner's skepticism that Apache will comply with the limit in the future does not, in and of itself, present a basis for the EPA to object to the Permit.

The Petitioner bears the burden to demonstrate that the Permit does not comply with the CAA. 42 U.S.C. § 7661d(b)(2). Here, the Petitioner fails to demonstrate that the Permit limit on $PM_{10}/PM_{2.5}$ is not enforceable as a practical matter due to any issues related to technical accuracy. Therefore, the EPA denies this claim.

### B. Claim 1B: The Petitioner Claims That "The Monitoring, Recordkeeping, and Reporting Conditions of the Final Permit Are Not Sufficient to Ensure that

**$PM_{10}/PM_{2.5}$ Emissions Will Not Actually Exceed the Limit of 9.9 Tons Per 12-Month Period."**

***Petition Claim:*** Claim 1B involves the same limit discussed in Claim 1A. The Petitioner emphasizes that since the proposed limit is significantly lower than the $PM_{10}/PM_{2.5}$ emissions that AEPCO identified as expected emissions from GT5 and GT6, the monitoring and recordkeeping requirements of the Permit are especially important. Petition at 10. The Petitioner claims that the monitoring, recordkeeping, and reporting requirements in the Permit are inadequate to account for all $PM_{10}/PM_{2.5}$ emissions from GT5 and GT6. *Id*. The Petitioner alleges that the Permit provisions for establishing a $PM_{10}/PM_{2.5}$ emission factor will not ensure an accurate accounting of all $PM_{10}/PM_{2.5}$ emissions. *Id*. at 11.

The Petitioner states that the Permit requires $PM_{10}$ and $PM_{2.5}$ emissions testing of at least one run during loads of 50 percent, 80 percent, and maximum load, and requires Apache to use the average of those test results to produce an emission factor for calculating $PM_{10}$ and $PM_{2.5}$ emissions. *Id*. (citing Permit Condition VI.D.2.a.). The Petitioner alleges that ADEQ has not justified how such an approach to calculating an emission factor can assure compliance with the Permit's limits. *Id*.

The Petitioner references a 2010 memorandum from GE Energy to argue that emissions of $PM_{10}/PM_{2.5}$ from combustion turbines can vary greatly. *Id*. (citing Petition Ex. 9). The Petitioner highlights from this memorandum several sources of $PM_{10}$ from gas turbines and states that PM emissions can have "significant variation" due to ambient air quality conditions, the fuel quality (*e.g.*, sulfur content in the natural gas), the water quality, and measurement uncertainty. *Id.* The Petitioner asserts that some of these issues are relevant to GT5 and GT6, specifically the use of water injection as part of the $NO_x$ control strategy. *Id*. at 12. The Petitioner argues that while new LM6000PC turbines typically have dry low $NO_x$ combustors for $NO_x$ control, AEPCO is proposing to install refurbished LM6000PC turbines which would use water injection as part of the $NO_x$ control strategy. *Id*. The Petitioner suggests that there is not only an increased chance of containments in the water contributing to an increase in $PM_{10}/PM_{2.5}$ emissions but also, because CT5 and CT6 are using water injection, there will be a need for higher inlet $NO_x$ loading to the selective catalytic reduction (SCR) system, which would require higher ammonia injection rates to achieve the needed $NO_x$ removal efficient across the SCR system and thus increase the opportunity for ammonia slip and formation of ammonium sulfate particulates. *Id*.

The Petitioner states that while ADEQ claims that using water injection and SCR for control measures have already been taken into consideration in the vendor guarantees, the Petitioner has not identified any such vendor guarantees in the permit record. *Id*. at 13. The Petitioner concludes that the Permit's monitoring, recordkeeping, and reporting requirements are not supported by technical evidence in the permit record. *Id.*

The Petitioner claims that the Permit fails to include sufficient conditions to ensure proper operation and maintenance of the SCR systems for CT5 and CT6, which would minimize both the $NO_x$ and $PM_{10}/PM_{2.5}$ emissions. *Id*. The Petitioner argues that the amount of sulfur in the natural gas used at CT5 and CT6 can exacerbate the variability of $PM_{10}/PM_{2.5}$ emissions and requested, in public comments, that ADEQ impose a condition ensuring that the sulfur content of the natural gas is minimized, such as a requirement to burn only "pipeline quality" natural gas. *Id*. The Petitioner asserts that ADEQ's refusal to add such a condition is arbitrary given that such a provision already applies to the other gas turbines at Apache. *Id.*

The Petitioner references other permit applications for other combustion turbine projects to be constructed in Arizona using GE LM6000PC turbines that indicated higher $PM_{10}/PM_{2.5}$ hourly emission rates than those identified by AEPCO in its Permit Application. *Id*. The Petitioner alleges that ADEQ's RTC and permit record fail to explain why Apache's assumed $PM_{10}/PM_{2.5}$ hourly emission rate for its refurbished LM6000 turbine is so much lower than the $PM_{10}/PM_{2.5}$ emission rate for the same turbine models. *Id.* at 14.

The Petitioner argues that allowing "the weighted average of test runs conducted at varying operating capacities in developing a $PM_{10}/PM_{2.5}$ emission factor would likely mean that the emission factor used for compliance with the ton per 12-month emission limits would not adequately reflect the likely variability in $PM_{10}/PM_{2.5}$ emission rates from the turbines and thus the calculation of total emissions over 12-months would not accurately reflect actual $PM_{10}/PM_{2.5}$ emissions." *Id*. The Petitioner contends that "[g]iven that AEPCO has projected emissions of 13.5 [tpy], well in excess of the proposed 9.9 ton per 12-month limit, ADEQ should have required that AEPCO use the worst case $PM_{10}/PM_{2.5}$ test result in establishing the emission factor to be used in calculating 12-month total emissions." *Id*.

***EPA Response:*** For the following reasons, the EPA denies the Petitioner's request for an objection on this claim.

ADEQ provided in its RTC the following statement in response to the Petitioner's comments on the Permit's monitoring, recordkeeping, and reporting requirements for the limit on $PM_{10}/PM_{2.5}$ emissions applicable to CT5 and CT6:

> The Department acknowledges the commenter's concerns. The turbines will be used as peaking units to address the transition between solar units. Thus, it is reasonable to use a weighted average of the runs when establishing the PM emission factor since the turbines will not be operating at a maximum rate for long periods of time. The weighted average of the runs will better represent the turbines running at different loads based on the demand.

RTC at 8.

The EPA finds that ADEQ has provided an explanation of how the method for establishing the emission factor is sufficiently conservative and representative of expected operating conditions. The Petitioner fails to refute ADEQ's justification for the use of average emission testing data to establish an emission factor. 40 C.F.R. § 70.12(a)(2)(vi). Instead, the Petitioner generally states that "the weighted average of test runs . . . would not adequately reflect the likely variability in $PM_{10}/PM_{2.5}$ emission rates from the turbines and thus the calculation of total emissions over 12-months would not accurately reflect actual $PM_{10}/PM_{2.5}$ emissions." Petition at 14. The Petitioner presents various arguments relating to potential sources of emissions variability, but neglects to directly address the fact that the current permit requirements account for variable emission rates across different operating scenarios.

The Petitioner suggests that ADEQ should have required that AEPCO use the worst-case $PM_{10}/PM_{2.5}$ test result in establishing the emission factor. While such a requirement would be a more conservative approach, the Petitioner has not demonstrated that a more conservative emission factor is necessary to assure compliance.

Overall, the Petitioner fails to substantively rebut ADEQ's justification and, in so doing, fails to demonstrate that a different method of establishing a PM emission factor is required to assure compliance with the $PM_{10}/PM_{2.5}$ emission limit. Therefore, the EPA denies this claim.

### C. Claim 1C: The Petitioner Claims That "The Lack in the Final Permit of Provisions Regarding Startups and Shutdowns Prevent the Practical Enforceability of the $PM_{10}/PM_{2.5}$ Emission Limits."

***Petition Claim:*** The Petitioner alleges that the Permit fails to include any provisions to account for $PM_{10}/PM_{2.5}$ emissions during periods of startup and shutdown to demonstrate compliance with the limit on $PM_{10}/PM_{2.5}$ discussed in Claims 1A and 1B. Petition at 16. The Petitioner argues that because the Permit Application estimated that CT5 and CT6 would have 730 startups/shutdowns per year combined, startups and shutdowns will be regular occurrences and must be accounted for in determining compliance with the 9.9 ton per 12-month period $PM_{10}/PM_{2.5}$ emission limit. *Id*.

The Petitioner notes that the Permit does not require any performance testing during periods of startup or shutdown and does not specify a $PM_{10}/PM_{2.5}$ emission factor to account for emissions during startup and shutdown. *Id*. The Petitioner argues that the performance testing requirement (Permit Condition VI.D.2.a.), which requires testing at 50 percent load, 80 percent load, and maximum capacity, will not accurately reflect $PM_{10}/PM_{2.5}$ emissions during startups and shutdowns. *Id*. at 17. The Petitioner contends that ADEQ should have required testing of $PM_{10}/PM_{2.5}$ emissions during startup and

shutdown or specified a reasonably conservative emission factor for $PM_{10}/PM_{2.5}$ emissions during startup and shutdown.

The Petitioner states that the Permit does not contain any recordkeeping requirements regarding the number of startups and shutdowns for CT5 and CT6. *Id*. The Petitioner alleges that ADEQ fails to explain, or present a formula for determining, how the number of startups and shutdowns and or/the length of time in startup and shutdown can be determined by the existing permit provisions. *Id*. The Petitioner also suggests that the $PM_{10}/PM_{2.5}$ emission limit could be exceeded if the expected length of time of startup/shutdown is exceeded. *Id*.

The Petitioner concludes that the monitoring, recordkeeping, and reporting requirements must include provisions to accurately account for the number of startups and shutdowns and the length of time in each to practically enforce the $PM_{10}/PM_{2.5}$ emission limit. *Id*.

***EPA Response:*** For the following reasons, the EPA grants this Petition claim and objects to the issuance of the Permit.

All title V permits must include testing, monitoring, recordkeeping, and reporting requirements that are sufficient to assure compliance with all applicable requirements and permit terms. 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1).

The EPA has previously explained:

> PTE encompasses "the maximum capacity of a stationary source to emit a pollutant under its physical and operational design." Thus, emissions from all emission units that are part of the source's physical and operational design must be included in calculating PTE . . . . Similarly, the EPA has previously explained that when a source accepts a source-wide PTE limit for a pollutant, all actual emissions of that pollutant from the source must be considered in determining compliance with the limit.

*In the Matter of Hu Honua Bioenergy*, Order on Petition No. IX-2011-1 at 18 (Feb. 7, 2014) (internal citations and footnotes omitted).

Here, AEPCO has accepted a limit on $PM_{10}/PM_{2.5}$ emissions applicable to CT5 and CT6, and thus compliance must be based on all actual emissions of those pollutants from those units, including emissions from startup and shutdown.

Permit Condition VI.D.3 states:

> Within 5 working days of the close of each calendar month, the Permittee shall calculate $PM_{10}/PM_{2.5}$ emissions from GT5 and GT6 by multiplying the

> heat input by the current $PM_{10}/PM_{2.5}$ emission rate in lbs/MMBtu for each unit in accordance with Condition VI.D.2.a or VI.D.2.b. The Permittee shall then add the $PM_{10}/PM_{2.5}$ emissions calculated from GT5 and GT6 to the sum of the prior 11 months to calculate the 12-month rolling total for each unit. The 12-month rolling total for GT5 and GT6 shall be added together. Compliance with Condition VI.D.1 is demonstrated if the combined sum is less than 9.9 tons. Until the performance test required by Condition VI.D.2.a occurs, the Permittee shall use a value of 0.089 lbs $PM_{10}/PM_{2.5}$ per MMBtu of heat input.

Permit at 46.

Regarding monitoring and recordkeeping for compliance with the $PM_{10}/PM_{2.5}$ limit, ADEQ explains in its RTC:

> The potential to emit $PM_{10}$ and $PM_{2.5}$ emissions for the proposed project was determined using the vendor guaranteed maximum $PM_{10}/PM_{2.5}$ emissions and worst-case scenario of 730 startup and shutdown events per year. The vendor guarantee is that the maximum $PM_{10}/PM_{2.5}$ emissions during any hour are 3.65 lb/hour, including startup and shutdown events. Thus, in an hour where there is either a startup or a shutdown there are not "additional emissions", the total will not exceed the 3.65 lbs PM per hour. Additionally, the permit requires monitoring and recordkeeping of the heat input every hour and the operating hours. The turbines are also required to operate a CEMS to monitor $NO_x$ emissions. Thus, the amount of startup and shutdown events can be determined from the monitoring and recordkeeping requirements already present in the permit and additional requirements will not be necessary . . . .

RTC at 9.

Regarding performance testing during startup and shutdown, ADEQ explains:

> Performance testing is conducted at rates that are representative of the operation of the unit. Startup and shutdown are not representative of the intended operation of the unit. In addition, since the units have a guaranteed maximum emission rate (even in times of startup and shutdown) from the vendor, there is no reason for this additional testing.

*Id*. at 9–10.

ADEQ states that there is a vendor guarantee of a maximum 3.65 pounds per hour (lb/hour) of $PM_{10}/PM_{2.5}$ emissions, which purportedly accounts for increased emissions from startups and shutdowns. However, the relevance of this vendor guarantee is

unclear, given that it is not included in the Permit as the method of determining compliance with the PM emission limit. The Permit instead requires Apache to calculate PM emissions by multiplying heat input by a $PM_{10}/PM_{2.5}$ emission rate in pounds per million British thermal units (lbs/MMBtu) (based on performance testing, as discussed in Claim 1B). Notably, ADEQ concedes that the performance testing prescribed in the Permit is to be done at rates ADEQ considers "representative of the operation of the unit," which would not include startup and shutdown. Thus, the Petitioner is correct in questioning whether this performance testing requirement can be relied upon to accurately reflect increased $PM_{10}/PM_{2.5}$ emission rates during startups and shutdowns.

In addition, ADEQ suggests that the number of startups and shutdowns can be determined based on existing Permit terms. That may be true, but it does not resolve the issue raised by the Petitioner, since the Permit does not contain any requirement for Apache to use information about the number of startups and shutdowns to calculate emissions from those events to demonstrate compliance with the PTE limit.

ADEQ asserts that additional performance testing during startup and shutdown should not be required. While the EPA generally agrees that additional testing to establish an emission factor during startup and shutdown may not be necessary, the Permit nevertheless needs to set forth a methodology or procedure that accounts for all emissions of PM, including during startup and shutdown. It is unclear from the Permit and permit record whether the Permit's emission factor-based calculation methodology accommodates all emissions, including startup and shutdown.

The Petitioner has demonstrated that the Permit and permit record are inadequate to determine whether Permit Condition VI.D.3 is sufficient to assure compliance with the $PM_{10}/PM_{2.5}$ emission limit. Therefore, the EPA grants this claim.

***Direction to ADEQ:*** ADEQ must revise the Permit and/or the permit record to ensure that the Permit contains sufficient testing and associated monitoring, recordkeeping, and reporting requirements to assure compliance with the $PM_{10}/PM_{2.5}$ emission limit for CT5 and CT6 during all operating scenarios, including startups and shutdowns, and that the selected monitoring is adequately justified in the permit record. ADEQ may be able to accomplish this in various ways. For example, ADEQ could revise the Permit to more clearly and unambiguously identify the methodology by which AEPCO will demonstrate compliance with the $PM_{10}/PM_{2.5}$ emission limit by separately quantifying emissions from startup and shutdown. Absent such a change to the Permit, ADEQ must explain why the existing Permit terms are sufficient to assure compliance with the PM emission limit notwithstanding the lack of separate quantification of emissions from startup and shutdown.

### D. Claim 2: The Petitioner Claims That "The Administrator Must Object to the Final Permit Because It Fails to Include Adequate Terms and Conditions to Create Enforceable Limitations on the New Turbines' Potential to Emit $NO_x$."

***Petition Claim:*** The Petitioner notes that the Permit imposes a limit on the PTE $NO_x$ from CT5 and CT6 of 19.9 tons per 12-month period. Petition at 19 (citing Permit Condition VI.F.1). The Petitioner alleges that the $NO_x$ emission limit is not practically enforceable because the permit record does not support a finding that CT5 and CT6 can comply with the limit at the planned levels of operations. *Id.* at 18. Similar to the limit on $PM_{10}/PM_{2.5}$ discussed in Claim 1.A, the Petitioner states that the Permit Application estimated higher $NO_x$ emissions for CT5 and CT6, predicted to be 21.1 tpy. *Id*. The Petitioner argues that the $NO_x$ limit is therefore not technically accurate because it was predicted that emissions will be higher based on Apache's planned level of operation and number of startups and shutdowns. *Id*.

The Petitioner provides an analysis using assumptions and re-calculated figures from the Permit Application to further suggest that the $NO_x$ emission limit is not a technically accurate limit and does not reflect Apache's planned level of operation or the stated level of $NO_x$ control with SCR in the Permit Application. *Id*.[13] The Petitioner states:

> Specifically, AEPCO assumed a $NO_x$ emission rate when the combustion turbines are in normal operating mode at 100% capacity of 3.98 lb/hr. This equates to 0.0095 lb/MMBtu, assuming the unit is operating at the stated maximum heat input capacity of 418.5 MMBtu/hr for each turbine. A $NO_x$ emission rate of 0.0095 lb/MMBtu equates to a $NO_x$ emission rate of approximately 2.4 parts per million (ppm). This is lower than the 2.5 ppm rate that AEPCO indicated that the $NO_x$ emissions at GT5 and GT6 would achieve with SCR. Further, the only other emission limit on $NO_x$ emissions from GT5 and GT6 in the Final Permit is a limit of 42 ppm (or 2.0 pounds per megawatt-hour) which does not reflect the use of SCR at all. Recalculating the predicted annual $NO_x$ emissions for GT5 and GT6 assuming a rate of 2.5 ppm (which equates to 0.01 lb/MMBtu and 4.185 lb/hr at maximum heat input capacity) during normal operation and assuming 365 startups and shutdowns per turbine, on average, at the much higher $NO_x$ emission rates AEPCO identified during startups and shutdowns (*i.e.*, 16.04 lb $NO_x$ per startup and 6.53 lb $NO_x$ per shutdown), the predicted annual $NO_x$ emissions from GT5 and GT6 is 21.74 tons per year.

*Id*. at 19-20.

The Petitioner concludes:

[13] The Permit Application indicated that $NO_x$ emissions were calculated based on a maximum vendor emission rate of 3.98 lb/hr for natural gas operation at 100% load with control by SCR, which will achieve 2.5 parts per million (ppm) $NO_x$ at 15% oxygen ($O_2$) for all load cases, except startup/shutdown. Permit Application at 14.

> The Final Permit fails to ensure the practical enforceability of the 19.9 ton per 12-month period limit on $NO_x$ emissions from the proposed two new turbines at Apache Generating Station to allow the turbines to lawfully be exempt from PSD permitting requirements for $NO_x$. ADEQ failed to provide a technically accurate justification for its 19.9 ton per rolling 12-month limit on $NO_x$ emissions in light of AEPCO's permit application, which indicates annual emissions of [$NO_x$] will be 21.1 tons per year.

*Id*. at 20.

***EPA Response:*** For the following reasons, the EPA denies the Petitioner's request for an objection on this claim.

Similar to Claim 1A, the Petitioner has not presented any basis for the EPA to object to the Permit in Claim 2. To the extent the Petitioner asserts that the Permit's $NO_x$ limit on GT5 and GT6 cannot be relied on to restrict the PTE of these units for purposes of determining whether the construction of those units triggers PSD requirements, this is not an issue properly before the EPA in the present title V petition response. As discussed in Sections II.C and IV.F of this Order, a title V petition is not the appropriate forum for reviewing the merits of the Petitioner's NSR-related claims, notwithstanding ADEQ's decision to issue a single permit document that contains both NSR- and title V-based requirements. *See Yuhuang II Order* at 7–8; *SRP Coolidge Order* at 23.

The Petitioner does not identify any other reason why the alleged technical inaccuracy of this limit would present a basis for the EPA's objection (*i.e.*, a basis for objection unrelated to PSD applicability). 40 C.F.R. § 70.12(a)(2)(ii). Nonetheless, to the extent the Petition could be interpreted to raise such a claim, it is denied. The Petitioner's claim that the limit is unenforceable because it is not a "technically accurate limitation" appears to be based on a misunderstanding of the EPA's guidance on this topic. As explained further in the EPA's response to Claim 1A, the fact that the Permit's $NO_x$ emission limit is lower than the predicted annual emissions rate for GT5 and GT6 estimated in the Permit Application is not relevant to whether the emission limit is enforceable as a practical matter.

Notably, unlike the Petitioner's challenges in Claims 1B and 1C (related to $PM_{10}/PM_{2.5}$), the Petitioner does not challenge the monitoring, recording keeping, or reporting permit terms associated with the $NO_x$ emission limit, and the Petitioner does not present any arguments that would demonstrate that the $NO_x$ limit is not enforceable as a practical matter. Therefore, the EPA denies this claim.

### E. Claim 3: The Petitioner Claims That "The Administrator Must Object to the Final Permit Because It Fails to Include Additional Provisions to Minimize $SO_2$ Emissions from GT5 and GT6."

***Petition Claim:*** The Petitioner notes that the Permit includes two $SO_2$ emission limits for GT5 and GT6: 110 nanograms per Joule (ng/J) gross output; and the units cannot burn any fuel which contains potential sulfur emissions in excess of 26 ng/J. Petition at 22 (citing Permit Conditions VI.E.1.a and b). The Petitioner asserts that if CT5 and CT6 emitted $SO_2$ at the rates allowed by these limits, emissions would be 81.2 tpy, which exceeds both the PSD major modification significance level of 40 tpy and the minor NSR permit threshold of 20 tpy. *Id*.

The Petitioner also alleges that neither of these limits reflect the $SO_2$ emission rates AEPCO assumed in the Permit Application. *Id*. The Petitioner claims that the Permit Application assumed an $SO_2$ emission rate of 0.5 lb/hour, which equates to 0.0012lb/MMtbu. The Petitioner suggests that the emission limits will not ensure that CT5 and CT6 use low sulfur natural gas, which the Petitioner suggests would ensure the integrity of AEPCO's calculations of PTE $SO_2$ for GT5 and GT6. *Id*. To this end, the Petitioner reiterates the request that the Permit specifically mandate the use of "pipeline quality" natural gas. *Id.*

Additionally, the Petitioner asserts that "mandating a reduced fuel sulfur content . . . will reduce the formation of sulfur trioxide particulates and ammonium sulfate particulates, which will help ensure compliance with the limit on $PM_{10}/PM_{2.5}$ emissions from the two new combustion turbines." *Id*. at 23. The Petitioner claims that "ADEQ's failure to impose a fuel limitation of only 'pipeline quality natural gas' does not ensure compliance with the limit on $PM_{10}/PM_{2.5}$ emissions from the two new combustion turbines." *Id*.

***EPA Response:*** For the following reasons, the EPA denies the Petitioner's request for an objection on this claim.

To the extent this claim involves Apache's calculation of PTE for purposes of determining whether the construction of CT5 and CT6 triggers PSD requirements related to $SO_2$, this is not an issue properly before the EPA in the present title V petition response. As discussed in Sections II.C and IV.F of this Order, a title V petition is not the appropriate forum for reviewing the merits of the Petitioner's NSR-related claims, notwithstanding ADEQ's decision to issue a single permit document that contains both NSR- and title V-based requirements. *See Yuhuang II Order* at 7–8; *SRP Coolidge Order* at 23.

The Petitioner does not identify any other reason why issues related to $SO_2$ emission calculations, limits, or PTE would present a basis for the EPA's objection. 40 C.F.R. § 70.12(a)(2)(ii). Nonetheless, for the sake of clarity, the EPA notes that in its RTC, ADEQ explains:

> The PTE for the facility is based on information provided [by] the vendor and the limit of 3,500 hours of operation for each turbine. The $SO_2$ limits listed in the permit are the applicable limits under 40 CFR 60 Subpart KKKK-Standards of Performance for Stationary Combustion Turbines and do not mean that the facility will be operating at those levels. The PTE for the facility for $SO_2$ will be significantly under the PSD significance emission rate threshold and the minor NSR review threshold.

RTC at 13

The EPA agrees with ADEQ's explanation of the relationship (or lack thereof) between the New Source Performance Standards (NSPS)-based emission limits on $SO_2$ and the calculation of the Apache's PTE for $SO_2$. As the EPA has previously noted, not all permit limits function to restrict PTE:

> [T]he fact that a unit is authorized to emit a certain amount by a generic emission limit . . . would not necessarily determine the facility's PTE . . . , provided the units were otherwise constrained by their physical or operational design or by other enforceable limits. While these generic limits may be able to be used to provide an enforceable limit to constrain PTE . . ., it is not required that they serve this purpose.

*In the Matter of Pasadena Refining System*, Order on Petition No. VI-2016-20 at 15 n.18 (May 1, 2018).

Another central thrust of the Petitioner's claim is the request for a permit term requiring "pipeline quality" natural gas. ACHD responded to this request as follows:

> The Department acknowledges the commenter's concern. The permit already clarifies that GT5 and GT6 will only fire natural gas in Condition VI.A. In addition, the facility is already required to demonstrate compliance with the fuel sulfur content in Condition VI.E.1.a. by maintaining "a current, valid purchase contract, tariff sheet or transportation contract for the fuel."

RTC at 14.

As ADEQ explains, the $SO_2$ limits listed in the permit are the applicable limits under 40 C.F.R. 60 Subpart KKKK, and the Permit contains a method of monitoring this limit from the NSPS, 40 C.F.R. 60.4365(a). The Petitioner has not alleged, much less demonstrated, that there is a need to specifically require "pipeline quality" natural gas to assure compliance with the underlying applicable requirement.

Within this claim, the Petitioner also includes two sentences alleging that a fuel

limitation is necessary to assure compliance with the emission limit on $PM_{10}/PM_{2.5}$. This brief allegation is insufficient to demonstrate that the Permit's current $PM_{10}/PM_{2.5}$ testing and emission calculation requirements are insufficient to assure compliance, as discussed in more detail in the EPA's response to Claim 1B. Therefore, the EPA denies this claim.

### F. Claim 4: The Petitioner Claims That "The Administrator Must Object to the Final Permit Because AEPCO's $PM_{10}/PM_{2.5}$ Modeling Analysis Did Not Model Worst Case Emissions and Understates Potential Ambient Air Impacts."

***Petition Claim:*** The Petitioner explains that because the projected $PM_{10}/PM_{2.5}$ emissions from CT5 and CT6 exceed Arizona's minor NSR permitting exemption thresholds, AEPCO was required to conduct an ambient air modeling analysis for $PM_{10}$ and $PM_{2.5}$ emissions. Petition at 24. The Petitioner claims that while AEPCO modeled startup and shutdown emissions for CT5 and CT6 for the 24-hour average $PM_{10}$ NAAQS and the 24-hour $PM_{2.5}$ NAAQS, AEPCO failed to model worst-case $PM_{10}/PM_{2.5}$ emission rates in the modeling. *Id*. at 24.

***EPA Response:*** For the following reason, the EPA denies the Petitioner's request for an objection on this claim.

The only basis for objection articulated by the Petitioner within Claim 4 involves ambient air quality impact modeling requirements associated with the NSR program in the Arizona SIP. As noted in Section II.C of this Order, the EPA's position can be summarized as follows: where a permitting authority authorizes the construction of a particular facility by issuing an NSR permit that was subject to public notice and the opportunity for public comment and judicial review, the terms and conditions of that NSR permit define the "applicable requirements" of the SIP for purposes of title V permitting and are not subject to review at the time of incorporation into the source's title V permit. This interpretation is explained more fully in the proposed Applicable Requirements Rule, 89 Fed. Reg. at 1160–84, the *Big River Steel Order*, and many subsequent orders. The circumstances here closely resemble those the EPA considered in the recent *South32 Hermosa Order*,[14] *SRP Coolidge Order*, and several prior orders.[15] In each of those cases, the title I-based NSR preconstruction authorizations and permit terms were developed at the same time as the title V permit terms, and all of the resulting requirements were included in one permit document. As explained in those orders, even where NSR and title V permit authorizations are contained within one permit document, such a permit action actually reflects two legally distinct permit actions by the state: a preconstruction permit issued under the EPA-approved title I SIP regulations governing NSR; and an operating permit under EPA-approved regulations

[14] *In the Matter of South32 Hermosa Inc.*, Order on Petition No. IX-2024-20 (May 30, 2025).

[15] For examples of petition orders addressing similar fact patterns to those present here, along with additional discussion, see 89 Fed. Reg. at 1164 n.71 and 1167–68.

governing title V. As relevant to NSR and title V permits in Arizona, the EPA has explained:

> Notably, the EPA's conclusion here is consistent with the EPA-approved regulations in the Arizona SIP that PCAQCD relied on in this permit action. These regulations provide that combined ("unitary") Class I permits in Arizona (like the Permit issued to SRP Coolidge) include two legally distinct components: (i) an NSR preconstruction authorization based on title I of the CAA that takes effect *before* the EPA reviews the permit, and (ii) an operating permit authorization under title V of the CAA that takes effect *after* the EPA reviews the permit. See A.A.C. R18-2-101.115; R18-2-302.G; R18-2-334.B; R18-2-402.C. Specifically, the Arizona SIP provisions addressing minor NSR provide: "No person shall begin actual construction of a new stationary source, or minor NSR modification, subject to this Section without first obtaining a . . . proposed final permit revision from the Director in accordance with R18-2-304." A.A.C. R18-2-334.B; *see* R18-2-402.C (same, for major NSR). The SIP further explains: "'Proposed final permit' means the version of a Class I permit or Class I permit revision that the Department proposes to issue and forwards to the Administrator for review in compliance with R18-2-307(A). *A proposed final permit constitutes a final and enforceable authorization to begin actual construction of, but not to operate, a new Class I source or a modification to a Class I source*." A.A.C. R18-2-101.115 (emphasis added); *see also* A.A.C. R18-2-302.G (similar text). Thus, in the case of a unitary Class I permit, the SIP provides that the title I-based NSR part of the permit—the authorization to construct—is effective at the time the "proposed final permit" is sent to EPA for review. By contrast, the title V part of the permit—the authorization to operate—is not effective until after EPA reviews the proposed final permit and the permitting authority subsequently issues the final permit. See A.A.C. R18-2-101.55 ("'Final permit' means the version of a permit issued by the Department after completion of all review required by this Chapter."); *see* A.A.C. R18-2-307 (requirements for EPA review, among other things). Allowing the NSR portion of a combined permit to become effective before the EPA's review makes sense, as the EPA's authority to review and object to proposed permits is unique to title V. *See* 42 U.S.C. § 7661d(b).

*SRP Coolidge Order* at 13–14 (footnotes omitted); *see South32 Hermosa Order at* 10–11 (similar conclusions for an ADEQ-issued permit).

Having considered the Permit at issue here, the EPA finds that the same logic and legal principles articulated in the *SRP Coolidge, South32 Hermosa,* and similarly situated orders apply to the combined minor NSR authorization and title V permit issued by ADEQ to Apache. A title V petition is not the appropriate forum for reviewing the merits

of the Petitioner's NSR-related claims, notwithstanding ADEQ's decision to issue a single permit document that contains both NSR- and title V-based requirements. In issuing a permit under the EPA-approved title I SIP regulations governing NSR, ADEQ established the NSR-related "applicable requirements" of the SIP for Apache. The fact that ADEQ did this within a combined NSR and title V permit does not alter this principle. Rather, given that the NSR-based applicable requirements are included verbatim in Apache's title V permit (by virtue of the single permit document), it is clear that the title V permit faithfully incorporates those applicable requirements. Thus, the Petitioners have failed to demonstrate that the Permit is not in compliance with the applicable requirements. 42 U.S.C. § 7661d(b)(2). Therefore, the EPA denies this claim.

To the extent the public wished to challenge ADEQ's NSR-related decisions, it had other available avenues to do so. For example, the minor NSR authorization in the Permit was subject to legal challenge through an appeal in state court. *See* Arizona Revised Statutes (A.R.S.) § 49-428. Or, the public could pursue enforcement if it believes Apache has violated requirements of the SIP. 42 U.S.C. § 7604(a)(1), (a)(3).

### G. Claim 5: The Petitioner Claims That "ADEQ Has Not Provided Support in the Record that GT5 and GT6 Are Not Subject to 40 C.F.R. Part 60, Subpart TTTTa."

***Petition Claim:*** The Petitioner claims "that there is no support in the administrative record for ADEQ's finding that turbines GT5 and GT6 are not subject to 40 C.F.R. Part 60, Subpart TTTTa." Petition at 25.

The Petitioner notes that the EPA proposed a revised NSPS, subpart TTTTa on May 23, 2023, which would impose more stringent limits on greenhouse gas (GHG) emissions than imposed in the current NSPS subpart TTTT. *Id.* at 26. The Petitioner explains that "[a]pplicability of the new NSPS standards is based on the date the proposed NSPS is published in the Federal Register, and facilities which commence construction or reconstruction after that publication date are considered subject to the NSPS emission limitations." *Id*. at 26. The Petitioner argues that in previous applicability determinations, the EPA has stated that "in order for a facility to rely on a contract to claim to have commenced construction prior to an applicability date of a NSPS, the contract must be for a continuous program of construction of the combustion turbines to be completed within a reasonable time," and that "the contractual obligation begins when the purchaser would incur a significant loss of funds if the contract is canceled." *Id*. at 27 (citing Petition Exs. 14, 15, 16).

Here, the Petitioner contends that in the Permit Application, dated July 2023, AEPCO claims to have "submitted their initial notification per the NSPS requirements" to have started "contractual construction on this project" and that "GT5 and GT6 would not be subject to NSPS, Subpart TTTTa when the rule is finalized." *Id*. at 26 (quoting Permit Application at 18–20). The Petitioner alleges that AEPCO failed to support its claim that

it finalized a construction contract prior to the proposal date of the NSPS subpart TTTTa. *Id*. at 26. The Petitioner relates how, in response to a public records request, ADEQ provided a letter from AEPCO stating "On November 8, 2022, AEPCO entered into a contract with ProEnergy Services, LLC for the procurement, delivery and installation of two simple cycle gas turbines capable of being retrofit[ted] in the future with either once through steam generator(s) or heat recovery steam generator(s)." *Id*. at 27 (quoting Petition Ex. 13, Letter from Eric L. Hiser, Hiser Joy, to Balaji Vaidyanathan, ADEQ at 1 (May 1, 2023)). The Petitioner then questions whether a copy of the contract was submitted to ADEQ to review. *Id*.

The Petitioner suggests that "it does not appear that AEPCO has the financial resources to procure the turbines or undertake the construction without a significant grant of federal funding," referencing an outstanding request that AEPCO had from the U.S. Department of Agriculture Rural Utilities Service's Electric Loan Program to procure and install CT5 and CT6. *Id*. at 28.

The Petitioner claims that there is insufficient evidence in the administrative record supporting ADEQ's findings that AEPCO has "entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification" and "has paid substantial sums, prior to the applicability date and therefore met the criteria of having commenced construction." *Id*. (quoting RTC at 15). Thus, the Petitioner concludes:

> ADEQ erred in finding that the [turbines] are exempt from the NSPS requirements of 40 C.F.R. Part 60, Subpart TTTTa by failing to review the contract terms and conditions that AEPCO referred to in its May 1, 2023 letter to ensure that the contract meets the definition of "commenced" as that term is defined in 40 C.F.R. §60.2 and as that term has been interpreted by EPA and the courts.

*Id*. at 27.

***EPA Response:*** For the following reasons, the EPA denies the Petitioner's request for an objection on this claim.

The criteria that determine the applicability of an NSPS are provided within the subpart. In this case, for subpart TTTTa, 40 C.F.R. 60.5509a(a) states, in relevant part:

> The GHG standards included in this subpart also apply to any stationary combustion turbine that commences construction or reconstruction after May 23, 2023, that meets the relevant applicability conditions in paragraphs (a)(1) and (2) of this section.

Under the General Provisions for 40 C.F.R. part 60, Standards of Performance for New

Stationary Sources, "*Commenced* means, with respect to the definition of *new source* in section 111(a)(2) of the Act, that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification." 40 C.F.R. § 60.2.

Here, the Petitioner questions ADEQ's determination that APECO had entered into contractual obligations to construct the turbines before May 23, 2023, and thus that CT5 and CT6 are not subject to the requirements of 40 C.F.R. part 60 subpart TTTTa.

In its RTC, ADEQ explains:

> The Department acknowledges the commenter's concern. Per the stated definition in 40 CFR 60.2, commenced means that the facility has "entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification." The facility entered into a contract on November 8, 2022, prior to the May 23, 2023 date in the applicability for Subpart TTTTa (§60.5508a). The facility has demonstrated that they have paid . . . substantial sums, prior to the applicability date and therefore met the criteria of having commenced construction."

RTC at 15.

While the Petitioner speculates that ADEQ did not review the contract at issue, the Petitioner has not demonstrated that this is required. ADEQ's determination is based on information provided by APECO. AEPCO's letter states not only that AEPCO had entered into a contract, but also that CT5 and CT6 were to be delivered in early April 2023, and that, "[a]t this time, AEPCO is subject to financial penalties should it refuse to accept the units for delivery." Petition Ex. 13. The Petitioner does not directly engage with these facts and explanations, and thus fails to demonstrate that this information is insufficient to establish that construction commenced prior to the NSPS applicability date. 40 C.F.R. § 70.12.

Throughout this claim, the Petitioner argues that the permit record does not contain enough information to support ADEQ's decision. But, in a petition requesting the EPA's objection to a title V permit, it is *the petitioner* who bears the burden to demonstrate that the permit does not satisfy the CAA. 42 U.S.C. § 7661d(b)(2). Thus, the Petitioner must provide justification to refute ADEQ's determination that CT5 and CT6 would not be subject to subpart TTTTa.[16] The Petitioner's only substantive argument on this point seems to be that because APECO applied for federal support for funding, APECO does

[16] On June 17, 2025, the EPA proposed to repeal the Greenhouse Gas Emissions Standards for Fossil Fuel-Fired Electric Generating Units codified at 40 C.F.R. part 60, subpart TTTTa. 90 Fed. Reg. 25752.

not appear to have the financial resources to procure CT5 and CT6 or undertake construction. The Petitioner does not explain—and it is not clear to the EPA—how this argument is relevant to whether AEPCO contractually commenced construction pursuant to the definition in 40 C.F.R. § 60.2 and the EPA's prior determinations for other facilities. Therefore, the EPA denies this claim.

## V. CONCLUSION

For the reasons set forth in this Order and pursuant to CAA § 505(b)(2) and 40 C.F.R. § 70.8(d), I hereby grant in part and deny in part the Petition and object to the issuance of the Permit as described in this Order.

Dated: September 16, 2025

Lee Zeldin
Administrator